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GB 2181477 A US 4972922 A

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(54) Abstract Title
Slidable ladder platform

(57) A ladder platform which is slidably attached to a ladder (36) has a platform section (14), base section (12), and a platform support section (16), which may be hingedly connected (38, 40). The base section (12) can be in the form of a ladder (fig 1), having two stringers (20) and a number of rungs (22). The stringers (20) are shaped to provide a channel which inter-engages and slides along complimentary structures on a ladder. The base (12) may carry a pivotal member (18) to lock the platform (14) in position on the ladder and the pivotal member (18) may be activated from the ground using a rope. The angle of the platform section (12) can be adjusted by a number of recesses (42) present on the underside which engage with rungs (22) on the platform support section (16).

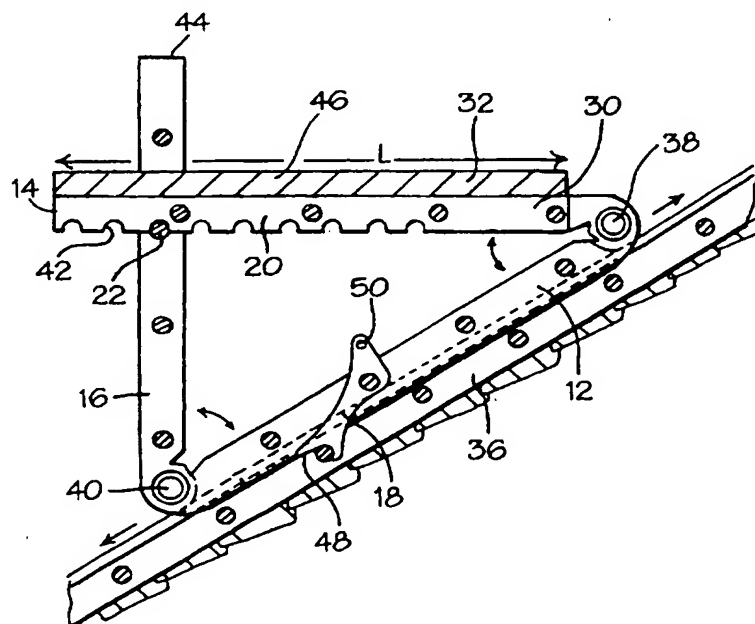
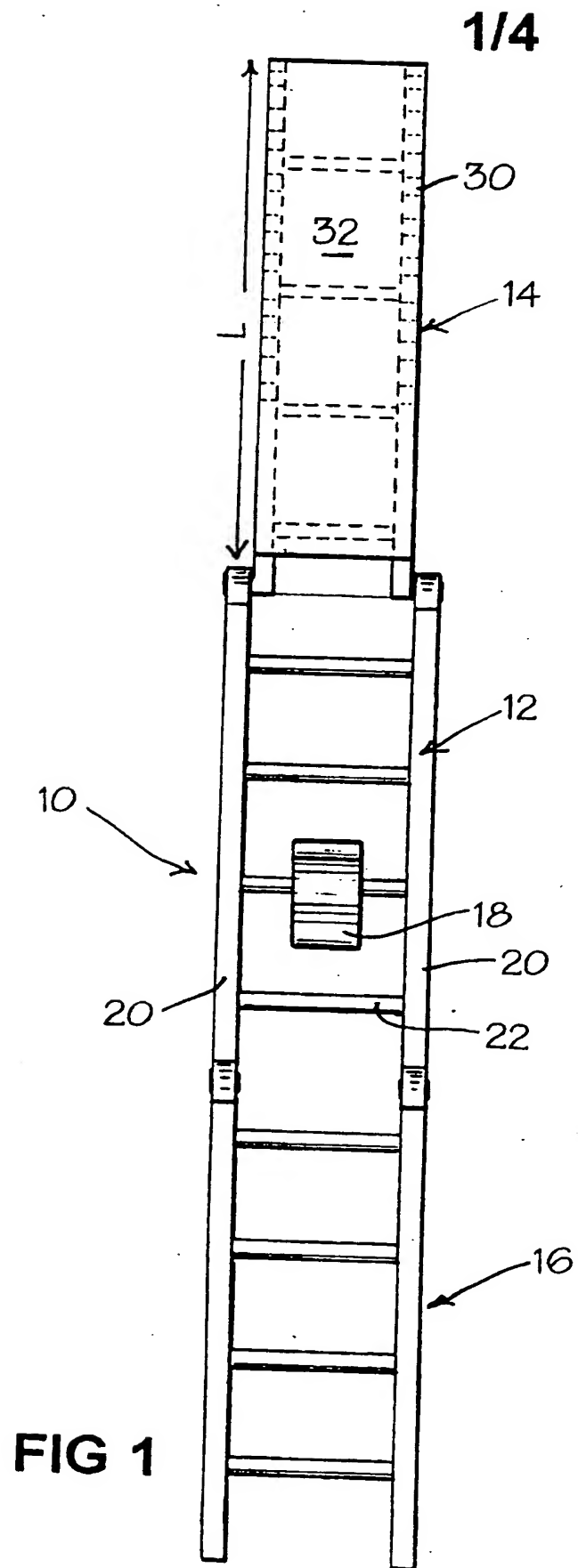


FIG 2

The claims were filed later than the filing date but within the period prescribed by Rule 25(1) of the Patents Rules 1995.

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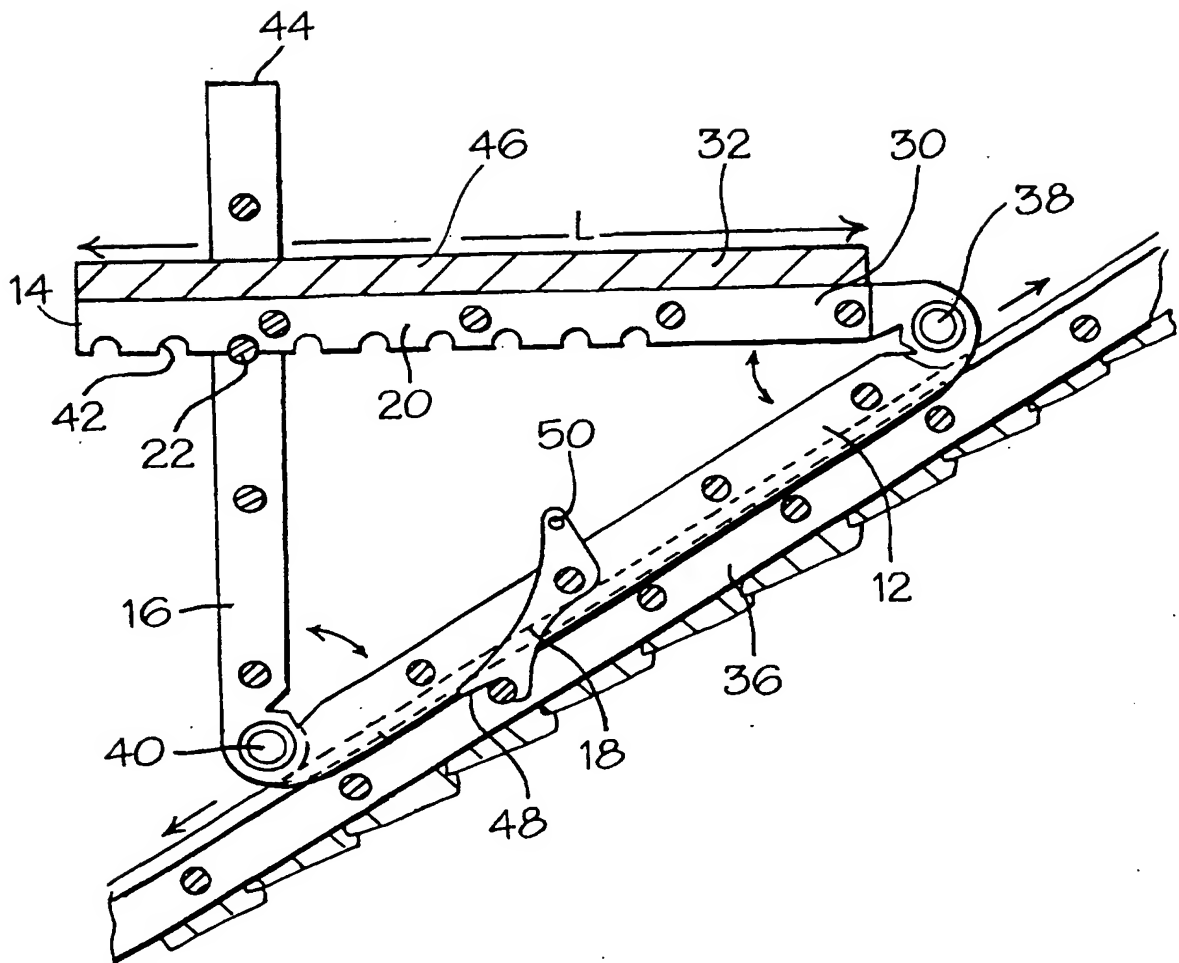


FIG 2

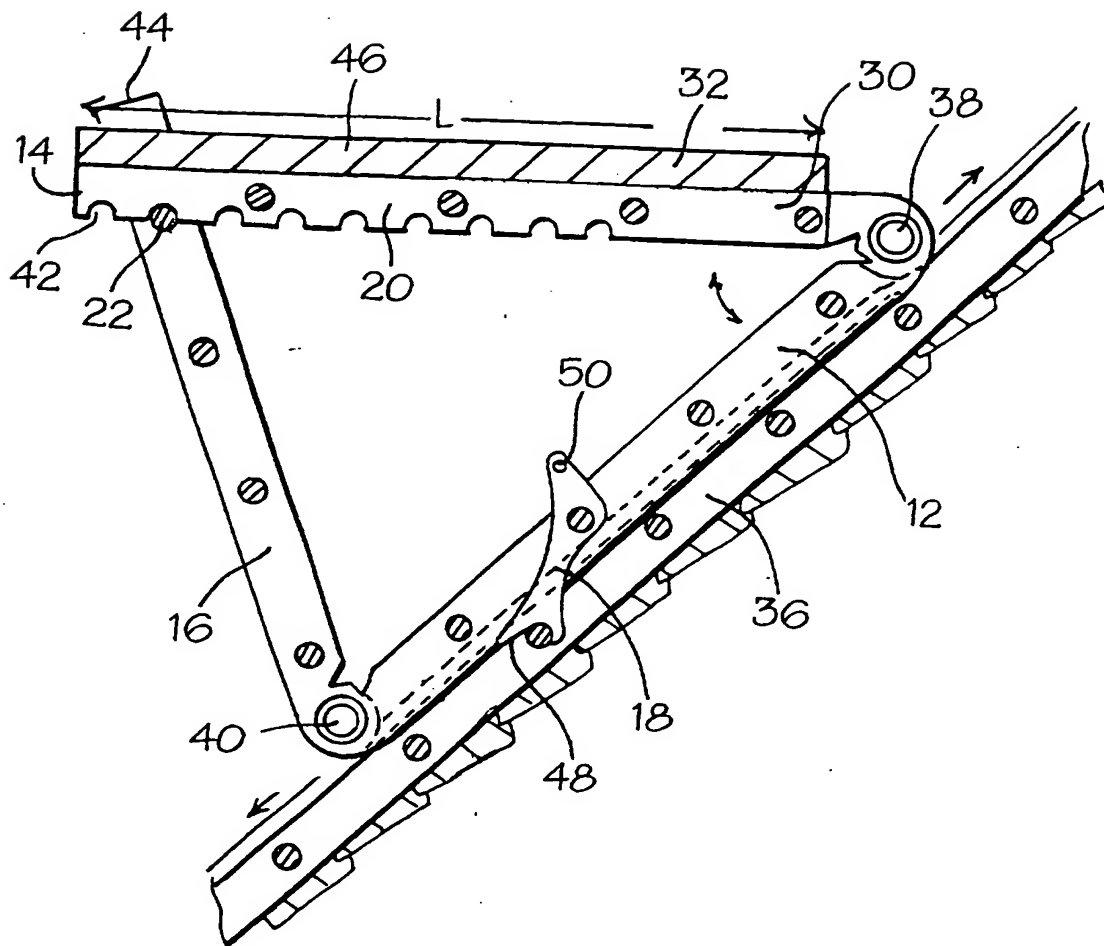


FIG 3

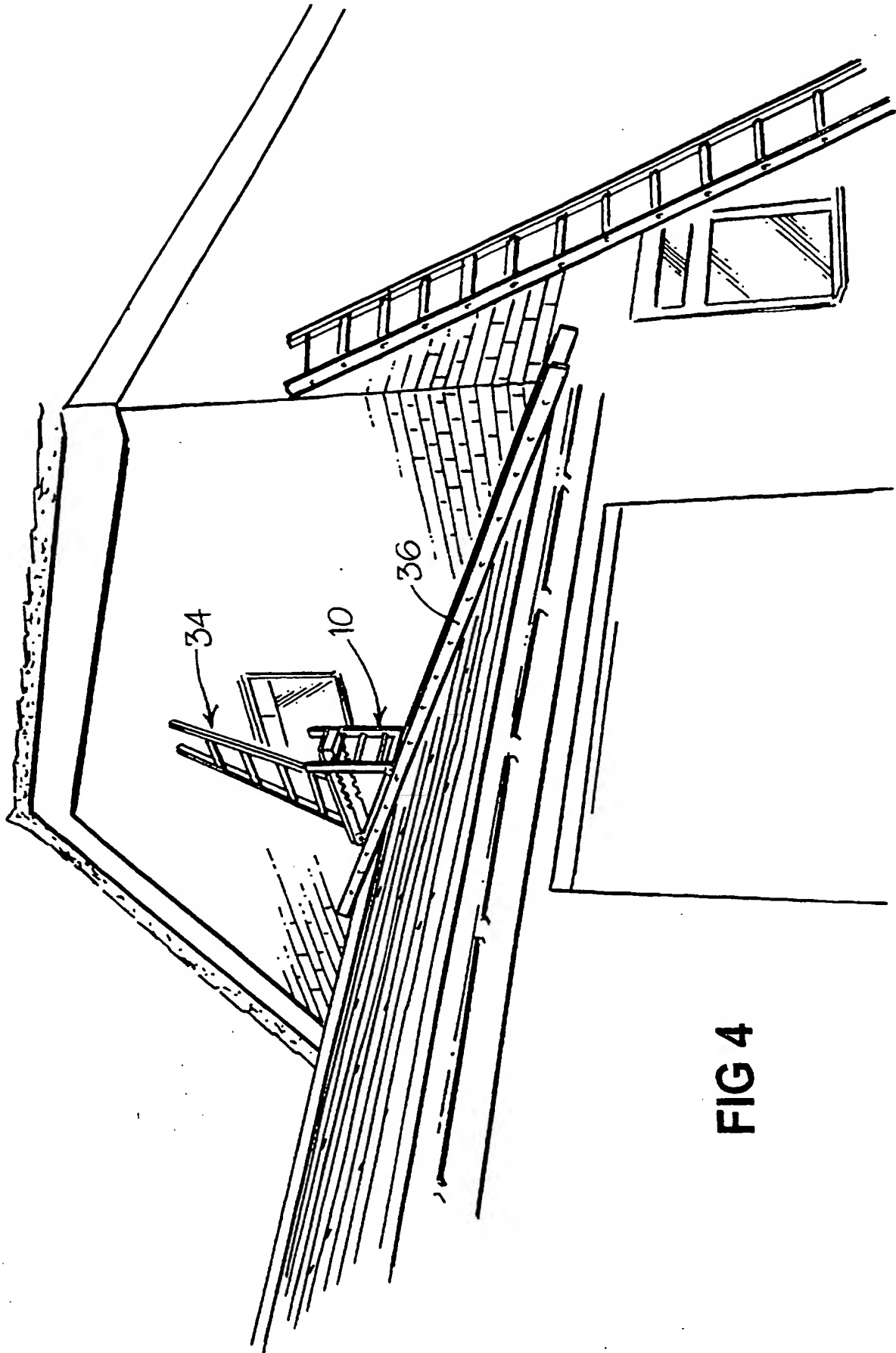


FIG 4

DESCRIPTION
PLATFORM

The present invention relates to a platform, and in particular a platform for use with a roofing ladder. The platform provides a horizontal surface on a pitched roof thereby enabling another part of a building, for example, a chimney stack or adjacent rising wall to be worked on.

Roofing ladders, commonly referred to as cat ladders are placed on a roof when, for example, tiling work is to be performed on the roof. These ladders generally have a hook at one end which engages with the ridge of the roof to prevent movement of the ladders down the roof. However, when work above a roof such as repointing, window installation or cleaning is to be carried out on an adjacent rising section of wall it is normal to erect costly scaffolding.

It is an object of the present invention to provide a horizontal platform on a roof to enable work on, for example, an adjacent rising wall to be carried out.

According to the present invention there is provided a platform comprising a base section adapted to be slidably mounted on a roofing ladder, a platform forming section connectable to said base section, and a platform support section connectable to said base section and said platform forming section.

Preferably the base section is a ladder comprising two stringers and a plurality of rungs.

The stringers are shaped to provide a channel which inter-engages and slide relative to a complementary structure on a roofing ladder. Typically the channel takes the form of

c-shaped, u-shaped or v-shaped member, although the skilled man will appreciate other shapes could serve the function outlined.

Alternatively, runners could be fixed to the stringers, which runners would co-operate with the stringers of a roofing ladder such as, for example, a cat ladder.

The three sections are connectable by means such as, bolts, hinges or other suitable connection means.

Preferably the base section is hingedly connected to the platform forming section and the platform support section and the platform forming section and platform support section are connectable by a simple connection or locking means. Preferably the connection or locking means has the facility to allow the respective sections to be connected such that the platform support section is substantially perpendicular to the platform forming section.

Preferably the base section carries means for locking the platform in position on the roofing ladder on which it slides. A preferred locking means is a pivotable member with a rung engaging surface which locks onto a rung of the ladder.

Preferably the pivotable member is provided with a means for attaching a rope such as, for example, a hole such that the platform can be raised and lowered on the ladder from below (by utilizing a pulley wheel situated at the top of the roofing ladder). By using a pivotable member with a rung engaging surface engagement can be achieved from afar.

The invention will now be described, by way of example only, with reference to Figs. 1 to 4 which illustrate a preferred embodiment of the invention.

Fig. 1 shows the platform in its unfolded form;

Figs. 2 and 3 show sections through the centre of the platform in alternate folded forms, on roofs of different pitch, with the platform locked in place on a ladder; and

Fig. 4 shows the platform in use.

Referring to Fig. 1 the platform 10 comprises a base section 12 adapted to be slidably mounted on a roofing ladder, a platform forming section 14 connectable to said base section and a platform support section 16 connectable to said base section and said platform forming section.

The respective sections preferably take the form of ladder sections comprising stringers 20 and rungs 22, although this is not essential.

In particular, the platform forming section 14 could take another form, for example, a solid section. However, in the embodiment illustrated the platform forming section comprises a ladder section 30 and a separate working platform 32. The working platform 32 may comprise one or more "stops" which may take the form of batons running along the length L of the platform about its perimeter which "stops" stabilize a working ladder 34 when used from the platform.

The platform 10 can be slid up a roofing ladder 36 in its folded/assembled or unfolded form. In the embodiment illustrated it is folded/assembled by means of two hinge assemblies 38 and 40 which hinge assemblies connect base section 12 with platform section 14 and platform support section 16. Platform support section 16 supports the platform section 14 and may be engaged in a number of set positions by means of recesses 42 in the

stringers 20 of platform section 14 which lock against the rungs 22 of the platform support section 16. Thus, the stringers 22 of the platform section 14 are positioned inside of the stringers of the platform support section 16.

The skilled man will, of course, appreciate that other mechanisms and arrangements could be used to securely lock or engage the platform in its "in use" position. For example, the stringers of the platform support section could ply outwardly towards their ends 44.

In another embodiment the working platform 32 could be provided with raising/lowering means so as to provide for fine adjustment of the working surface 46 which ideally will be horizontal.

The base section 12 comprises a means 18 for locking the platform into position on a ladder. The preferred means pivots inside of the stringers 12 on a rung 22 of the base section 12 and has an engaging face 48 which engages the rungs 22 of the roofing ladder. Preferably the locking means 18 is provided with a means 50, for example, an aperture, for connecting a rope thereto. This can be used to raise and lower the platform on the, for example, roofing ladder by way of a pulley connected to the roofing ladder.

The platform described, which utilizes at least one ladder section has the added benefit that it can be used as a step ladder in its folded form or an ordinary ladder in its unfolded or partially unfolded form.

By selecting the lengths of the respective sections carefully or by using alternative connection or locking means the platform can be assembled such that the platform support section is a ladder which is angled so that the platform section 14 can be accessed via the platform support section 16 from below (cf Fig. 2).

CLAIMS

1. A platform comprising a base section adapted to be slidably mounted on a roofing ladder, a platform forming section connectable to said base section, and a platform support section connectable to said base section and said platform forming section.
2. A platform as claimed in claim 1 in which the base section is a ladder comprising two stringers and a plurality of rungs.
3. A platform as claimed in claim 2 in which the stringers are shaped to provide a channel which inter-engages and slides relative to a complementary structure on the roofing ladder.
4. A platform as claimed in claim 3 in which the channel takes the form of a c-shaped, u-shaped or v-shaped member.
5. A platform as claimed in any of the preceding claims in which the platform forming section and platform support section are hingedly connected to the base section.
6. A platform as claimed in any of the preceding claims wherein the platform forming section and platform support section are releasably connectable to one another.
7. A platform as claimed in any of the preceding claims in which the base section carries a means for locking the platform in position on the roofing ladder on which it slides.

8. A platform as claimed in claim 7 wherein the locking means is a pivotable member with a rung engaging surface which locks onto a rung of the roofing ladder.
9. A platform as claimed in claim 8 in which the pivotable member is provided with a means for attaching a rope such that the platform can be raised and lowered on the roofing ladder from below.
10. A platform as claimed in any of the preceding claims in which the platform section comprises one or more stops.
11. A platform section as claimed in claim 10 in which the one or more stops take the form of batons running along the length of the platform about its perimeter.
12. A platform as claimed in any of the preceding claims in which the platform section comprises two stringers comprising a plurality of recesses which in use lock against rungs provided in the platform support section.
13. A platform as claimed in claim 12 in which the stringers of the platform section are positioned inside the stringers of the platform support section.
14. A platform as claimed in any of the preceding claims wherein the base section comprises a means for locking the platform into position on the roofing ladder.
15. A platform as claimed in claim 14 wherein the means is a pivot means with a rung engaging face.
16. A platform as claimed in claim 14 or 15 wherein the means for locking the platform into position on the roofing ladder is provided with a means for connecting a rope thereto.
17. A platform as claimed in any of the preceding claims in combination with a

roofing ladder.

18. A platform substantially as herein before described with reference to the figs.



INVESTOR IN PEOPLE

Application No: GB 9904312.7
Claims searched: 1-18

Examiner: Dr. Lyndon Ellis
Date of search: 10 July 2000

Patents Act 1977 Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.R): E1S SLA1, SLN, SLW15

Int CI (Ed.7): E06C

Other: Online: EPODOC, WPI, JAPIO

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
A	GB 2181477 A (Joseph Dunmore)	-
X	US 4972922 (Bernard G. Levine) Note column 3, lines 4-9 and in fig 5, base portion 3, platform portion 21 and platform support section 37.	1, 5-7, 14 and 17

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

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